REVIEWS.

A TEXT-BOOK OF OPHTHALMOLOGY. By WILLIAM F. NORRIS, M.D., Professor of Ophthalmology in the University of Pennsylvania, and CHARLES A. OLIVER, M.D., Surgeon to Wills Eye Hospital, Philadelphia. In one octavo volume of 641 pages, with 357 engravings and 5 colored plates. Philadelphia: Lea Brothers & Co., 1893.

FOR some time we have looked for this work, as it was known that the authors had for several years had it in preparation, and their high standing in the profession had warranted the hope that the ideal text-book at last had come. We are sorry that our hope was unfounded, for we confess to deep disappointment, in that nothing new or in the way of progress is to be noted; especially are we at loss to know why reproductions of old prints are constantly used in new books when photographs of actual cases, to be had at every clinic, can be so easily used, and when properly tinted in natural colors make an object-lesson not easily forgotten, beside making the volume containing them of marked value. The volume is divided into two parts, the first part by Charles A. Oliver, M.D., and the second part by the senior editor, William F. Norris, M.D.

Part I. contains two hundred and eighty pages, divided into ten chapters; these embrace the anatomy, physiology, and embryology of the eye, together with optics and the errors of refraction. Part II. is divided into nineteen chapters and treats of the diseases of the eyes, embraced in three hundred and forty-one pages.

The chapters on Embryology, Anatomy, and Physiology are good and well illustrated; we note, however, that the inter-retinal fibres of the optic chiasm are spoken of, when we were under the impression that this old idea had been abandoned.

Chapter IV., "Optics, Catoptrics, and Dioptrics," is exceedingly full, clear, and concise, and will be fully understood by all readers. Chapter VIII. is devoted to an exposition of the "shadow test," "retinoscopy," etc., the author preferring to use the term *fundus reflex test*, "as it distinctly shows that the results are dependent upon the play of light and shadow, through media of different powers, strengths, and curvatures, on the pigment coat of the retina." He says: "It should never be used for the prescribing of correcting lenses, except where it is impossible otherwise to obtain proper subjective results." Chapter IX. "Methods of Determination of Errors of Refraction and Accommodation." We regret very much that in this chapter we find much to criticise adversely as to methods employed, and shall be obliged to call attention to several gross errors of statement. After speaking of Placido's disk as a means of determining astigmatism, Dr. Oliver says: "If more accurate objective study as to the angle and the degree of corneal astigmatism be desired . . . the so-called *ophthalmometer*—more correctly *keratometer*—should be brought into use. Unfortunately, however, its great cost, the difficulty of accurate adjustment to most students, and the discrepancy in its answers when incorrectly used seem to hinder it in some degree, in its present form, from being more generally employed in ordinary clinical work."

Then follows a half-page illustration of the Javal and Schiötz ophthalmometer of 1889 in a first edition text-book published in the middle of 1893. Why not figure the more recent instrument with the more complete illuminating electric-light attachments? After describing the ophthalmometer and the plan of its operation, the author concludes the paragraph as follows: "If the aërial images in the tube separate in the vertical meridian, this meridian has the shorter radius, whilst if they overlap in this meridian, it has the longer radius." Now, he is so clearly in error that the least observant can see it at a glance. If you approximate these reflectors in a less curved meridian and then turn them to a more curved meridian of the cornea they *cannot separate*, but must *overlap* in order to be reflected from the cornea. Unfortunately, this grave error is emphasized as correct when applied to the 1889 model, as seen in a footnote on p. 258. All of the Javal ophthalmometers work on the same principles. On the same page we also note reference to Davis, who is quoted by Dr. Oliver as follows: "Davis says that the so-called 'primary position,' or position which represents that point at which the transverse lines of the reflectors become continuous, is the first to establish. To get this position properly and systematically he places the long white pointer horizontally. If the lines are coincident the primary position has been obtained. If not, the tube is to be revolved from right to left, for about forty-five degrees, and the same distance from left to right, thus causing the pointer to travel about forty-five degrees above and below the horizontal meridian." What Davis really says is: "To obtain the primary position first turn the long indicator to 0°; if the transverse lines are coincident at this point go no further—that is the primary position. If not coincident at the zero point turn the tube from right to left—that is, the long indicator from 0° to 135°; if the transverse lines do not become coincident before or when 135° is reached go no further in that direction, but turn back to zero, turning this time from left to right toward 45°; the lines will necessarily become coincident before 45° is reached. The primary position is never further than 45° on either side of zero degrees."

Further errors in quotation from Davis are noticed, as: "Davis says astigmatism with the rule may be written 2. D. 90° + or 180°; and astigmatism against the rule, 2. D. 180°+ or 90°." When correctly quoted it should be "astigmatism with the rule 2. D. 90°+, or 180°—(minus); astigmatism against the rule, 2. D. 180°+ or 90°—(minus)." We trust that these mistakes will be corrected in the next edition.

We were at a loss to know how such errors as those pointed out could occur, if the author was in the daily habit of using the ophthalmometer; but we find the solution of the difficulty, for on turning the page to the next chapter, which treats of the "Correction of Errors of Refraction and Accommodation," we read: "Having, then, assumed that a mydriatic is to be employed, the next point is, What one shall be used?" Again, "Although these plans may often result in patients seeking advice from others who may rest content with an imperfect correction of some manifest error, yet in all such instances it is far more than equivalent recompense to know that the steady, quiet reputation of many years of but little error in refraction-work is infinitely better than the flash-like brilliancy of the moment in quickly giving corrections that may or may not be right." We are informed that atropine "will not be necessary in aphakia."

This whole chapter shows that the author is in the habit of using atropine as a mydriatic in all cases of error of refraction, even in the aged, for he says: "These latter cases may frequently be fairly well estimated with an extremely weak and evanescent solution of one of the drugs sufficiently repeated to make almost certain the result." We certainly do not have to resort to these methods in our practice, and our citizens are fairly well spectacled. We are particularly well pleased with the section dealing with the ocular muscles and the numerous tests for the detection of muscular insufficiencies.

Part II., *Diseases of the Eye*, by Dr. Norris, is embraced in three hundred and forty-one pages. His style is pleasing and particularly clear, although at times we find fault with him for not saying enough on a given subject; it is probably for a good reason. Chapters on diseases of the conjunctiva and cornea treat of these in the usual way, and nothing specially new is added.

Chapter XV., "Diseases of the Sclera." All that the author has to say on this subject is told on one page, when we think much more might have been added.

Then follow Chapters XVII. and XVIII., "Accommodation" and "Errors of Refraction." It is easy to see here that the senior editor is also imbued with the idea that no error of refraction can be properly corrected without the use of a mydriatic. In reference to the ophthalmometer he says: "However, the results obtained by it have usually failed to agree accurately with those arrived at by the use of test lenses."

The chapters on internal diseases of the eye are all good, but call for no special comment. Particularly full and interesting is Chapter XXIV., "Glaucoma." We fail, however, to notice any reference to the use of eserine sulphate as a means of treatment independent of iridectomy; we certainly believe many acute attacks can be cut short by the use of eserine alone.

The succeeding chapter, "Affections of the Eye Muscles," is exceedingly interesting and the plan of treatment advised orthodox and to be followed by all practical surgeons.

Chapter XXIX., and last, "Operations on the Eye," is well illustrated and the text fairly full. Antiseptic surgery is advised in its practical form and not as a fad, and all of the operations detailed are of the most modern. Especially clear are the remarks on "Ectropion," and with the numerous plates presented make the subject full in every particular. Dr. Norris, in speaking of "graduated tenotomy," says: "That it is difficult to accurately foresee any desired effect is evident from the number of times that even experts in the method are obliged to repeat the procedure." This hits the nail on the head—they do not know, but attack one muscle after the other. We are glad to see the author's idea so clear on this subject.

All that is said on the subject of extraction of cataract we can cordially commend and are fully in accord with; it is safe and good teaching. An index and full set of test-letters conclude the volume. The work is gotten out by the publishers in very good form and makes an attractive-looking volume. We shall look soon for a second edition, when any defects pointed out may be corrected. W. O. M.

ÉTUDES DE CHIRURGIE MÉDULLAIRE. Par A. CHIPAULT. 8vo., pp. vi., 403. Paris: Felix Alcan, 1894.

STUDIES IN SPINAL SURGERY.

IT is not often that one comes across such a treasure-house as this admirable book on Spinal Surgery by the well-known French surgeon. Those who have read the *Revues de Chirurgie* and *de Neurologie*, as well as other journals, know very well the many contributions to surgical literature, especially to that of the spine, which he has already given to the public, but it is still a surprise to see how complete this portion of the work in question is, and especially will be when entirely finished. This is the first part of a work to be completed in either three or four volumes. The present volume includes the History, Technique, and Indications. The second, now in press, treats of the Diagnosis of Spinal Lesions, and the third, and possibly a fourth, will take up, in detail, Fractures, Pott's disease, Spinal Fistulæ, Tumors, Spina Bifida, Curvatures, etc.

The author has none of the national seclusion which is so frequently characteristic of French writers. One sees constantly books from which it would be supposed that surgery began and ended within the boundaries of the French Republic, but in the present work not only are German and English authors constantly quoted, but all the well-known American surgeons appear in its pages. There seems to have been hardly even the Transactions of an American State Medical Society that he has not searched and extracted all of value in it. So far as the reviewer is aware, no important case and no important paper from an American author has been overlooked; and strange to say, the only misprint of an American name (p. 155) is that of McCosh, who appears as "M. Cosh." The illustrations also are admirable, and are taken freely from foreign as well as French authors. On p. 30 he figures a dural needle identical with one devised some years ago by the reviewer (Buck's *Reference Handbook of the Medical Sciences*, vol. viii. p. 210), but abandoned in favor of the smallest Hagedorn semicircular needle.

He points out and illustrates by a good woodcut (Fig. 13) that the posterior surface of the bodies of the vertebræ can be reached by drawing the spinal cord aside, and it is probable that in view of the elasticity of the roots of the spinal nerves operators have often been too timid in thus displacing the cord by suitable retractors.

In cases of vertebral abscess he approves very strongly of Treves' method in the lumbar region, which in fact has now become, one might say, classic. In the dorsal region he quotes the bold, and almost rash, proposal of Vincent for trans-somatic vertebral and pre-medullary drainage, and in the cervical region gives his hearty approval, as seems just, to the antiseptic method of reaching a post-pharyngeal abscess by an incision along the anterior or posterior border of the sterno-cleido-mastoid muscle, rather than through the mouth.

For the treatment of hydrocephalus by indirect drainage through the spine, he proposes, and with a certain amount of reason, puncture of the spinal envelope at the lumbo-sacral junction, between the fifth lumbar and the first sacral vertebræ, instead of that of Quincke, between the third and fourth. Parkin's more recent method for the relief of intra-cranial pressure by the withdrawal of cerebro spinal fluid from the basal sub-arachnoid space (*Lancet*, July 1, 1893) is not included in this chapter, since it was published undoubtedly too late to be included. Not only has he gathered together a large number of cases, but he has evidently studied them with care and good judgment, and with his conclusions we can rarely differ.

Thus in fractures implicating the cauda equina, his conclusions are: "1. In fractures of the lumbar or sacral vertebræ, with irreducible displacement of the fragments, immediate interference should be the rule. 2. In fractures reduced spontaneously or by surgical manipulation, wait. If the course of the accident is progressively toward health, abstain from intervention. If the case is stationary, intervention by the end of the first month is proper; not earlier, for the restoration of function cannot begin before this period; not much later, since incurable degenerations of the spine may be established" (p. 71). In the cauda equina he also rightly advocates suture of the nerves if it be needed. And again: "In complete fractures of the vertebræ with persistent compression of the cord between the body and the lamina, surgical interference has only resulted beneficially when it has been made very early, and in traumatisms of the inferior part of the spine and not its superior portion, and also in case the cord has simply been compressed and not destroyed" (pp. 102, 103). And again, in fractures of laminæ at any level, lamnectomy (as, following Lloyd, he proposes to spell it) is to be done, with the removal of any extra-dural clots.

Following this chapter on traumatism is a table of one hundred and sixty-seven cases of lamnectomy in fractures, and a second table of eight cases of surgical operations other than lamnectomy in fracture, and a third of one hundred and four cases of surgical interference for gunshot wound, practically covering all the modern literature of these cases.

In Pott's disease with paraplegia, his conclusion is that surgical interference should be much restricted. The results have been far from giving that which had been hoped, and he would restrict it to special and rather rare varieties of pathological change, such as paraplegia from cold abscess, from direct compression of the medulla by granulation tissue, and paraplegia with perimeningitis, which has resulted in a permanent sclerosis. In addition to this restriction, the contra-indications from bad general health of the patient, from the extent of the osseous lesion, and intra meningeal tubercular infection, should ever be borne in mind. Following this also is a table of fifty-nine cases of operation in Pott's disease without paraplegia, and another of one hundred and three cases of lamnectomy in Pott's disease with paraplegia.

Of spinal tumors he gives a table of twenty-two cases which have come to operation, and his conclusions are in favor of operation in case the disease is not malignant or disseminated; but he promises in a future volume to enter into this matter much more fully.

Following these chapters are some interesting observations of varied character, including one excellent case of his own (p. 367) of osteomyelitis of the body of a lumbar vertebra, with complete and durable